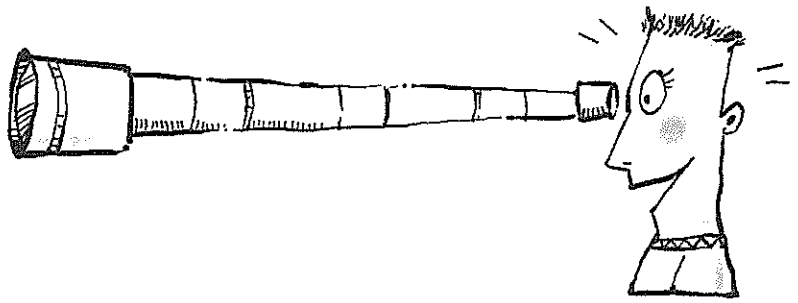


Stars



The **stars** that we see in the sky at night are huge bodies of luminous gas, like our Sun. However, they appear as small points of twinkling light, because they are so much further away. With the naked eye, under good conditions, it is possible to see 2,000 stars at any one time. Using a powerful telescope, millions of stars can be seen.

Stars give off heat and light, and in this way they are different to planets, which merely reflect light.

Astronomers call conspicuous groups of stars **constellations**. Bigger groups of stars are called **galaxies**. Our sun and solar system form part of the galaxy known as the Milky Way, which is just one of the many galaxies in the Universe. The Milky Way contains millions of stars, and it has a diameter of 100,000 light years.

A **light year** is not a measure of time, but of distance. It is the distance that light can travel in one year. (Light travels about 300,000 km per second.) Astronomers use light years to measure distances in space.

Light from Alpha Centauri, the nearest star to us apart from the sun, takes 4.3 years to reach our Earth. Light from the Andromeda Nebula, the most distant object visible to our naked eye, takes 2,200,000 years to reach the Earth.

Our sun is a single star, but this is uncommon. Most stars exist in pairs that orbit each other. Alpha Centauri is actually a triple star system.

Shooting stars are not stars, but meteors that flare up as they enter the Earth's atmosphere.

A. Choose the correct answer.

1. Shooting stars are really (planets, meteors) that enter the Earth's atmosphere.
2. The Sun is a (planet, star).
3. The nearest star to the Earth is (the Sun, Alpha Centauri)

B. Use the reference section of your library to find out about what the following star terms mean. Write your answers in your science book.

(i) red giant

(ii) white dwarf

(iii) supernova

(iv) pulsar